TECHNICAL SPECIFICATIONS
SECTION 011000

PART 1 GENERAL

1.1 CONTRACTOR RESPONSIBILITY

A. Contractor responsibility for each item of work for the project includes provision of all labor, equipment, materials, supervision, and all other pertinent items of interest required to competently and satisfactorily complete each task.

1.2 MEASUREMENT AND PAYMENT

A. Measurement and payment for all work to be in accordance with Section 004100 Bid Schedule and as field measured and verified by the Engineer. All payments to be made following field verification by the Engineer of completed work, and submittal of required invoice, payment tracking, lean releases, and certified payroll.

1.3 WORK ITEMS BRIEF DESCRIPTION

A. 000000-01 General Conditions
   1. Measurement and payment for this item will be determined based on the percentage of all other completed tasks. Payment for this item will be in the same percentage as the invoiced percentage of the total original contract amount as determined per invoice. Final invoice and payment to include no less than ten percent (10%) of the total amount of this bid item.
   2. This item is to cover the cost of all administration, overhead, insurance, bonding, incidentals, and other soft costs not included in the other items of the bid schedule but that are necessary for completion of this project.

B. 015000-01 Temporary Facilities
   1. The project is located in downtown Orleans, California. Access to the project site is limited to Highway 96. Temporary Traffic Control may be required for short durations to move materials and equipment to and from the site as well as to install utility crossings/connections within the Highway right-of-way.
   2. Restroom facilities will need to be provided and maintained for the duration of the project in accordance with OSHA requirements for minimum restroom units per workers onsite.
   3. Temporary fencing/gates will need to be implemented for the site. Access from the highway should be restricted at the existing driveway to the property. Or, at a minimum, the area(s) for stockpiled materials and equipment should be fenced.
   4. Securable containers for tools remaining on site are highly recommended.
   5. Electricity will need to be provided by the Contractor via portable generators or, temporary construction service from Pacific Gas and Electric (PG&E). It is the Contractor's responsibility to coordinate with PG&E for temporary electricity and to pay any and all costs associated with the temporary power service.
   6. Temporary water will need to be provided by the Contractor. Watering of soils for compaction and dust control will need to be provided by the Contractor. Trucks or temporary use of municipal water are acceptable provisions of water for this project. Contractor will have the responsibility of working with the Orleans Service District for any water procured from the domestic water facilities located on or near the site.

7. Temporary irrigation water may be needed for landscape watering. The contractor is responsible for the cost of water consumed to establish landscape vegetation during the time set for construction of the project. The Owner will assume financial responsibility for irrigating landscape plants following issuance of the Letter of Substantial Completion.
8. Additional temporary facilities needed for the project, as determined to be necessary by the Contractor, must also be provided and paid for under this bid item. No allowance will be made for additional temporary facilities' cost following bidding unless such required facilities are directly caused by a change in the contract scope of work and identified as such under an official change order approved by both the Contractor and the Owner.

C. 017100-01 Mobilization/Demobilization
1. Item to cover cost of mobilizing and demobilizing of all equipment, personnel, and materials to/from the site for the duration of the project and as needed in order to complete the project.
2. Mobilization/Demobilization cost is to be for primary activities. Subsequent mobilizations to the site not expressly caused by alterations or modifications to the contract Scope of Work, or otherwise justified by unforeseen causes, will not be considered grounds for additional compensation or extension of contract time.

D. 024000-01 Demolition
1. Proposed demolition work has been identified and included in the plan set, for contractor convenience.
2. Contractor is responsible for coordinating with utility purveyors for removal of their facilities (ie: power, phone, water, etc) and protecting/preserving their facilities along the frontage of the site as well as any improvement features they have within the site that are identified to stay in place.
3. Owner will be responsible for any fees by the utility purveyor(s) for removal of site improvements. Contractor will be responsible for any utility purveyors' fees for repair/replacement of facilities that are to remain in place that are damaged/destroyed by Contractor's activities including the acts of subcontractors of the General.

E. 311100 Clearing & Grubbing
1. Clearing for the project will include tree removal, tree branch trimming, and brush/ shrubbery removal to remove all trees and branches that are in direct conflict with proposed site improvements. Tree removal is to occur such that trees are completely removed including root, trunk, and branch. All cellulose material generated (stumps, branches, shrubbery, brush, grasses) is to be transported off of the site and disposed of in strict accordance with applicable laws. All disposal fees to be included in the price provided under bidding. No additional payment will be made by the Owner for disposal fees. At the Contractor's discretion cellulose material may be ground or chipped onsite. grindings/chips can be broadcast throughout the "landscape" zones within the project property or removed from the site.
2. All shrubbery, tree, and vegetation scheduled to remain in place is to be protected at all times. Adequate barriers and markers are to be installed by the Contractor to protect such areas from adverse impacts. Barriers and markers for protected zones are to be maintained during all construction activities and removed once all contractual work and obligations are completed.

3. The Owner will provide initial clearing limits. The contractor will have the responsibility of maintaining all clearing limit markers during site activities. If, for any reason, the clearing limit markers are removed or destroyed the Contractor will be responsible for paying to have the limits re-established. The Owner's surveyor will be available for re-establishing markers at the Contractor's expense and at no additional cost to the Owner. The Contractor must remove and dispose of all limit markers following final inspection as part of solid waste management.
4. Grubbing is to occur throughout the site, specifically in locations designated to receive surface improvements not designated as "landscape". All proposed building pads, access roadway alignments, curb, gutter, and sidewalks, and all other finish grade structures proposed, that will not benefit from topsoil, duff, or organic material are to be completely grubbed down to solid material (approximately four inches (4") average depth below existing grade). All soil rich with organic material is to be stockpiled in designated areas on site. All such material is scheduled to be used in landscape zones following site development under the next phase of this project. All stockpiled topsoil and cellulose rich soils are to receive stockpile management erosion control measures including perimeter barriers and covers.
5. All areas to receive fill material must first be stripped of vegetation and top soil. No fill is to be installed over vegetation. No cellulose material is to be buried, burned, or otherwise disposed of onsite other than as stockpiled material as addressed above.

F. 312200-01 Site Grading
1. Item to include all required grading for the project according to the grading plan. In General the site is to be graded to promote storm runoff away from improvements and into designated storm water zones.
2. Control grades will be set by the Engineer and field verified by the Contractor for sub-grade and finish grade.
3. Initial grade control will be provided by the Owner and set by the Engineer. It is the responsibility of the Contractor to provide day to day grade setting and checking. The Owner reserves the right to randomly check and verify grades and development during construction. All facilities and regions will need to be verified by the Engineer prior to Contractor moving to the next layer (particularly for: roadway and parking lots). Contractor will need to coordinate with the Engineer for scheduling grade staking and verification. No invoicing for such work will be paid prior to Engineer verification of completed work.
4. Grading of the stripped site will need to occur to minimize "duck ponds" and other water dams that will prevent the free flow of storm water runoff from the site towards proposed and existing storm water conveyance improvements and established drainage ways.
5. Any and all fill required for the site must be installed in lifts no more than one foot thick, and mechanically compacted in place. Sufficient compaction of fill must be such that a loaded ten cubic yard dump truck crossing the fill will not depress or deform the surface of the fill zone more than one inch. All fill is to be placed on stripped, solid ground. Fill with face slopes higher than five feet, as measured from toe to hinge, is to be keyed in place and installed with exposed face slopes at 1.5:1 (H:V) maximum.

6. All impacts to the site from general traffic accessing the site including equipment and truck impacts must be smoothed and left in a clean and uniform condition once all other activities are completed for the site.

G. 312500-01 Erosion Control
   1. Prior to conducting any work incorporating the use or application of Concrete or mortar for the site the Contractor will need to install a concrete washout. The washout will need to be inspected and approved by the Engineer prior to concrete work beginning. If a location for building a concrete washout, other than that shown on the plans, is desired by the Contractor then a request for alternate location will need to be made to the Engineer and approved prior to building the washout. Alternate methods of concrete containment may be entertained but any such system will need to be presented as Value Engineering per Section 012400 and approved prior to implementation.
   2. Street Sweeping and Cleaning: the Contractor is to implement a street sweeping and cleaning schedule for the duration of the project. The existing frontage improvements, including but not limited to existing sidewalks, curb & gutter, and paved roadways are to be kept free of debris. Material tracked onto the frontage improvements during construction activities, such as moving vehicles and equipment on and off of the site, are to be cleaned at the end of each work day. Hand broom sweeping and washing will be acceptable for minor material removal. Street sweeping with mechanical equipment will need to be conducted at least once a week to address any materials tracked onto existing improvements, as required by construction activities.
   3. Existing storm water drain inlets are to be protected with sand bags or alternate system as submitted by the Contractor and approved by the Engineer. All proposed drainage facilities will need to be protected once they are established. Protections to remain in place until Contractor demobilizes from the site or, in the case of bioswales and drainage ditches, until the permanent vegetation or rock is in place.
   4. All silt fences and waddles will need to be in place prior to major earth moving activities. They will need to be maintained for the duration of construction activities onsite. damaged or degraded barriers will need to be fixed or replaced as needed throughout the project.

H. 321100-01 Class 2 (¾-) Aggregate Base for Main Road and Parking
   1. AB to be provided for the proposed site roadway and parking lots. AB to be procured, provided, installed, and compacted by the contractor. All AB to be procured from a single source. Compaction to be field verified per Cal 216 by the Engineer prior to AC install. Contractor to schedule and coordinate with Engineer for compaction methodology development and approval. Compaction method to include field testing of spreading, watering, and rolling sequence. Contractor to submit roller specifications to Engineer prior to scheduling methodology development.
   2. Contractor to provide compaction curves for AB (secured from the supplier) or provide (2) five gallon buckets of material to the Engineer for laboratory testing and generation of compaction curve(s). Contractor to cover the cost of laboratory testing of AB material. Include the price for curve generation under this item of the bid schedule.
   3. Note AB for vertical curbs, sidewalks, and other improvements for the site are not to be included under this item. Such AB will need to be accounted for and a price provided to cover under those specific bid items.

4. Schedule AB installation for paved zones as closely as possible to the tentative date for AC install. Prolonged exposure of AB to weather and other impacts because of poor scheduling and delays in paving activities will not be considered for additional cost or time to correct eroded or impacted AB.

I. 321300-01 ½" Type A Hot Mix Asphalt Concrete
   1. Contractor to procure, provide, and install AC for the proposed site roadway and parking lots. AC to be procured from a single source. AC to be installed in as few lifts and days as practical and as allowable per industry standards in strict conformance with California Department of Transportation Standard Specifications Section 39.
   2. All AC termination to PCC and existing AC to be cleaned and tack coated just prior to AC install.
   3. Contractor to provide CalTrans CEM-3513 or approved alternate AC verification as part of the submittal package for AC.
   4. All AC to be compacted to a minimum of 95% of maximum density as field verified per Cal 216. Contractor to provide AC compaction curve as part of submittal process.

J. 321300-02 Striping, Pavement Markings, & Signage
   1. Item to include all permanent striping, pavement markings, and signage needed for the project. In general, Contractor to provide striping and pavement markings for the intersection of the proposed site road to Highway 96 and the parking spaces for each parking lot. Intersection striping and marking, at a minimum to include stop bar and fifty feet solid center line from stop bar into site. Signage to include proposed road name sign and stop sign at intersection. Stop sign to be oriented for traffic leaving the site traveling onto Highway 96. New Road sign to be oriented parallel with the new road, perpendicular to Highway 96, and viewable/legible by traffic traveling in both directions on Highway 96.
   2. All striping, markings, and signage to be per Caltrans standards.

K. 321600-01 Vertical Curb
   1. Vertical curb to be per Caltrans A87A Type A1-6 Curb or as indicated on the plans, if different.
   2. All vertical curb to be installed with a minimum of four inches of class 2 (3/4-) aggregate base below the curbs. AB to be compacted to 95% per Cal 216.
   3. Cold joints in curb to be fitted with (2) 12" #4 bar dowels with 6" embedded in concrete on each side of the joint. Dowels can be installed in wet concrete or drilled and epoxy set if installed after concrete has cured.
   4. Curbs to be installed with deep expansion joints at a maximum spacing of eight feet on center (align expansion joints with sidewalk when curb and sidewalk are congruent).

L. 331100-01 Water: Connect to Existing Main
   1. Contractor to coordinate with the Orleans Community Services District for connecting to the existing water main near Highway 96. Contractor to comply with the requirements and recommendations of the service district for the connection.
   2. Contractor to pothole the area designated for the connection to determine actual location of the exiting main as well as size and material. If possible, contractor to hot-tap the main to prevent the need for main shutdown and impacts to existing services. If a hot-tap is not possible then Contractor is to coordinate with service district for scheduling and notification to existing service holders of shutdown.

3. If the existing main is equipped with a tracer wire then Contractor is to connect tracer wire for new water line to existing wire and provide access to wire in the proposed isolation valve box nearest the existing main on the new line.
4. Contractor to provide thrust block for connection or Sigma Lok restraint in the event of a Tee install rather than a hot-tap.

M. 331100-02 Water: 6" HDPE DR11 Main
1. New main line to be installed in strict conformance with the requirements of the service district and the recommendations of the manufacturer.
2. Butt fusion welds to be set for as many segments of pipe as practical prior to placement of line in the ground. Line to be placed in trench using mechanical assistance to help minimize the potential of fractures or punctures from pipe free falling into trench from finish grade height.
3. Trench work for each day of install to be backfilled to finish grade each day. No open ditches are to be allowed overnight other than at the temporary end of the line. If the end of the line is brought to finish grade then temporary backfill is to be provided around the pipe at the end of the day. If the pipe end is allowed to remain below grade then a traffic plate or other means of protection is to be placed over the trench.
4. All new water lines for the project are to be equipped with tracer wire and warning tape. Tracer wire to be placed at the bottom of the pipe and as close as practical to the pipe. Warning tape to be placed directly over pipe with approximately six inches of separation between the tape and pipe (per plan details).

N. 331100-03 Water: 6" Gate Valve Assembly
1. Gate valves to be per service district requirements and manufacturer recommendations.
2. Gate valves are to be flange and bolt connections with full gasket system. Flange adapters are to be welded to water line for each gate valve.
3. Gate valves to be equipped with riser from top of valve to valve box (riser to be 6" HDPE pipe or approved alternate). Valve boxes to be set at finish grade. Valve boxes to be traffic rated concrete with metal frame and lid.
4. Tracer Wires for water lines to be stubbed up into valve boxes. Coil enough tracer wire in each box to allow a minimum of 18" of wire to be pulled above valve box lid for connection of tracing equipment.

O. 331100-04 Water: 1" Service Stub Out
1. Water services to be installed in strict conformance with service district requirements and per manufacturer recommendations for all components.
2. Service to include tap to new 6" main, meter setter, pressure regulator/ backflow preventer, 1" PE water line, and valve boxes. Tap to 6" main saddle and corporation stop to be installed when 6" main is installed where possible. Meter setter and pressure regulator/backflow preventer to be installed within five feet of each other and access to hardware can be provided in a single, traffic rated valve box or multiple boxes in series.
3. End service stub out to be marked with temporary 2x4 Doug fir post. Marker post to be installed at end of pipe at subgrade elevation and to extend to a minimum of three feet above finish grade. Post to be painted/marked blue and have the words "Water Service" written legibly on both wide sides of the post.

P. 331100-05 Water: 4" Warf Hydrant Assembly
1. Warf hydrant to be installed in strict conformance with service district requirements and the recommendations of the manufacturer.

2. Warf hydrant to be installed with the main access port facing the proposed cul-de-sac. Hydrant to be installed with an isolation valve for the hydrant connected with a flange system. Hydrant to be protected with bollards per plan detail.

Q. 331100-06 Water: 2" PE Water Main
   1. 2" water main to be the same as the 6" water main in scope.

R. 333000-01 Sewer: Low Pressure Dosing Field
   1. Dosing field to be installed per plans and manufacturer recommendations.
   2. Dosing field zone to be excavated to subgrade elevation and leveled. All rocks larger than three inches in diameter are to be removed from the subgrade as well as any backfill that will be used to cover the field.
   3. Splitter valve to be installed in plastic or concrete riser or box that protrudes approximately eighteen inches above finish grade. Lid to box to be installed with screws or bolts to limit unauthorized access. Splitter valve to be set to work in alternating sequence with leachate being delivered to half of the field each time the dosing pump is activated.
   4. Manifolds from splitter to leach lines to be installed in joint trench. Two manifolds to be installed with each manifold supplying leachate to half of the field.
   5. Leach line is to be installed with orifices facing up. Each leach line is to be equipped with a PVC ball valve. The ball valves between manifold and leach lines are to be used to adjust flow of each leach line during the squirt test to help regulate leachate supply to make application of leachate for each line as equal/uniform as practical. Access to these valves following balancing of the field will not be required and they can be covered up with backfill material.
   6. Each leach line is to be equipped with a clean out at the end of each line. Cleanouts are to be established in a landscape valve box per plan detail.
   7. Contractor to coordinate with the Engineer for squirt test and pump test prior to installing quick chambers and backfilling the leachate field.

S. 333000-02 Sewer: Miscellaneous Plumbing
   1. Bid item to include cost for procuring and installing all of the required plumbing to connect the septic tank, AX100, dosing tank, and splitter valve.

T. 333000-03 Sewer: 500 Gallon Dosing Tank/Pump
   1. System to be installed per manufacturer recommendations.
   2. Dosing tank to be concrete or fiberglass and be equipped with a 24" diameter access port to finish grade. The dosing pump is to be mounted on a rail system to allow for easy retrieval for maintenance and replacement. The pump rail is to be constructed of stainless steel or alternate material that will not degrade over time from exposure to water and leachate. The rail should extent up the access port to just below the tank lid.
   3. Pump, pump control and electrical lines to be per Orenco recommendations/supply.

U. 333000-04 Sewer: Control Panel
   1. Control panel to be TCOM and be installed per manufacturer recommendations. Item to include procurement and installation of control panel backboard, control panel, and all conduits and cables to connect the control panel to the septic system and electric service.
   2. Control panel to be set on fiberglass backboard adjacent to sewer electric service panel. Backboard to be mounted on galvanized posts set in concrete.

3. Control panel box to be equipped with a lock. System visual and audible alarm may also be mounted adjacent to the control panel.
4. Contractor to coordinate with control panel supplier for install and configuration.

V. 333000-05 Sewer: AX-100
1. AX-100 to be installed per manufacturer recommendations as provided in install manual.

W. 333000-06 Sewer: 10,000 Gallon Tank System
1. Tank to be installed per manufacturer recommendations and installation manual.
2. Xerxes eight foot diameter tank recommended or approved alternate. Tank to be manufactured with baffle system to create three chambers. Chambers to include: 5,000 gallon primary, 2,500 gallon pre-anoxic, and 2,500 gallon recirculation/blend.
3. Inlet port to be 6" diameter. Outlet port to be 4" diameter.
4. Access ports to each chamber to be 24" diameter and have risers to finish grade. Two access ports to be provided for the primary and recirculation chambers. One port for the pre-anoxic chamber. Supply line between pre-anoxic chamber and pod to be installed in port riser. As well as recirculation line from recirculation chamber to pre-anoxic chamber. Also discharge line from pod to recirculation chamber to be installed in recirculation port riser.
5. Deadman anchorage system to be prefabricated or poured in place concrete (builder's choice). Tank strapping and restraint connection to Deadman block to be in strict conformance with tank manufacturer requirements.

X. 333000-07 Sewer: 48" Manhole Assembly
1. Item to be installed in strict conformance with the manufacturer's recommendations, per plan details, and per the direction of the Engineer.
2. Manholes to be eccentric cone style for vertical ladder install. Manhole lids to be set to match finish grade.
3. Tracer wire for sewer main to be stubbed up in manholes. Allow enough slack material to be able to pull a minimum of eighteen inches of tracer wire out of manhole for connecting tracing equipment.

Y. 333000-08 Sewer: 6" PVC SDR35 Main
1. Item to be installed in strict conformance with the manufacturer's recommendations, per plan details, and per the direction of the Engineer.
2. Sewer main to be equipped with tracer wire and marker tape. Tracer wire to be set at the bottom of the pipe and as close to the pipe as practical. Marker tape to be at least 6" above pipe and oriented/aligned directly above the pipe.
3. Pipe embedment and backfill to be sand. Minimum of four inches below pipe and six inches above and on sides. Remaining trench backfill above sand layer up to finish grade to be native material. Backfill to be placed in one foot maximum vertical lifts and mechanically compacted.

Z. 333000-09 Sewer: 4" PVC Service Later Stub-out
1. Item to be installed in strict conformance with the manufacturer's recommendations, per plan details, and per the direction of the Engineer.
2. Stub out trench work to be similar to sewer main scope above.
3. End of lateral pipes to be equipped with temporary cap to help keep dirt from entering pipe and for leak testing.

4. All laterals to have 2x4 doug fir marker installed at the end of pipes. Marker board to be installed with the bottom of the board at the bottom of the pipe. Board to extent to three feet above finish grade. Board to be painted green and have the words “Sewer Lateral” written on each wide portion.

AA. 334000-01 Storm Drain: French Drain

1. Item to be installed per plan and the direction of the Engineer.
2. French Drain rock to be three inch minus washed/clean rock. Trench to be lined with non-woven geotextile to help segregate native material from drain rock to minimize fines intrusion into the drain system. Fabric to be installed along bottom of trench and up both walls to finish grade. Trench rock to be installed to finish grade and left open face.
3. Contractor to stockpile drain rock on site in a manner to reduce fines and contaminants from entering the rock prior to install. Any rock contaminated with dirt and installed in the trench will need to be removed/replaced with clean rock.
4. End of French drain pipe at bioswale to be stopped short of the bioswale and covered over with drain rock.

BB. 334000-02 Storm Drain: Bioswale

1. Item to be installed per plan details, and per the direction of the Engineer.
2. Bioswale slope and conform to finish grade to be slightly rolled to allow for ease of mowing and maintenance.
3. Bioswale vegetation to be Pennington Seed Inc. “Humboldt Mix” or approved equal alternate. Coverage application to be one pound per one hundred square feet. Contractor to provide watering of seed following install and either until the plant life is thick, mature, and thriving or until completion of all other items of the contract. Responsibility for maintenance and watering of the bioswale will transfer to the Owner at completion of the project.
4. Contractor to provide a minimum of one 25 pound bag of seed to the Owner for reseeding and filling in sparse areas following completion of the project.

CC. 337000-01 Electric: Overhead to Underground Conversion

1. All electric system work to be per PG&E requirements.
2. Contractor to coordinate with PG&E for conversion. Owner will pay any fees associated with electrical work to PG&E direct.
3. Contractor to install new 35’ pole, per plan to accommodate overhead to underground conversion. Pole location and size to be confirmed with PG&E prior to order or install.
4. Onsite conduits for electrical main to terminate in pull box at the base of the new pole. Conduit from pole to also terminate in pull box.

DD. 337000-02 Electric: OWTS Service Pole

1. All electric system work to be per PG&E requirements.
2. Contractor to coordinate with PG&E for new service. Owner will pay any fees associated with electrical work to PG&E direct.
3. Contractor to set new 35’ service pole for the onsite wastewater system service. Pole to be equipped with weather head, conduit, and guy wire (if required). Meter panel to either be mounted on the new service pole or the control system backboard. If meter panel is set on pole then a separate load panel will need to be installed on the control panel backboard for sewer system circuits.

EE. 337000-04 Electric: Transformer Pad

1. All electric system work to be per PG&E requirements.
2. Contractor to install PG&E specified transformer pads. Pad Box Code Number 360003. Contractor to confirm pad box prior to order or install.

FF. 337000-04 Electric: Joint Trench

1. All electric system work to be per PG&E requirements. Contractor to coordinate with PG&E for trench inspection(s) and signoff. PG&E minimum requirements typically include visual inspection and mandrel testing of all conduits. Refer to PG&E design and requirements for complete instructions on inspections and scheduling.
2. Joint Trench to be per plans and the direction of the Engineer.
3. Joint trench occupants to include electrical, landline communications, and high speed internet. Conduit orientation, separation, and configuration to be per PG&E joint trench detail and requirements.
4. All conduits to be backfilled with sand. Portions of trench that are outside of roadway and parking lot zones are to be backfilled above sand layer and to finish grade with site native materials. Trenches through road and parking lot zones are to be backfilled above the sand layer with Class 2 (3/4-) Aggregate Base. All trench backfill is to be installed in lifts that do not exceed one foot vertically. Lifts are to be mechanically compacted in place. All trench backfill compaction to be a minimum of 95% of maximum density. Field testing of trench backfill to be provided by the Owner. Engineer to test density and moisture per Cal 216.

GG. 337000-05 Electric: Junction/Pull Box

1. All electric system work to be per PG&E requirements.
2. Electric pull boxes to be 17”x30”x26” for primary junctions and 17”x30”x18” for secondary. Contractor to verify box type and dimensions with PG&E prior to order or install.

HH. 337000-06 Electric: Single Family Home Service Stub Outs

1. All electric system work to be per PG&E requirements.
2. Service conduits to be encased in sand per PG&E backfill requirements. Backfill above sand layer in landscape zones to be site native material. Backfill above sand layer in road or parking lot zones to be Class 2 (3/4-) Aggregate Base. All backfill to be installed in one foot maximum vertical lifts and mechanically compacted.
3. Service stub outs to have conduit ends temporarily capped or sealed to help prevent dirt and water intrusion. Service ends to be marked with 2x4 Doug fir marker post. Post to extend from the end of the conduit to three feet above finish grade. Posts to be painted red and marked “Electric Service” on both wide sides of the board.

II. 338000-01 Communications: Overhead to Underground Conversion

1. All communications system work to be per Frontier requirements. Contractor to coordinate with Frontier. Overhead to underground conversion to occur on same pole described under Electric overhead to underground item above.

JJ. 338000-02 Communications: Joint Trench

1. All communications system work to be per Frontier requirements.
2. Joint trench to be per scope described under electric joint trench above.

KK. 338000-03 Communications: Junction/Pull Box

1. All communications system work to be per Frontier requirements.
2. Communication junction/pull boxes to be 17”x30”x18”.

LL. 338000-04 Communications: Pedestals

1. All communications system work to be per Frontier requirements.
2. Contractor to sweep conduits up above finish grade in a tight bungle in locations for pedestals. Frontier to install pedestals following contractor conduit install. Conduit ends will need to be capped/covered to prevent water and foreign object intrusion. Pull tape for each conduit to be installed with a minimum of three feet of pull tape beyond the end of each conduit. Pull tape to be wrapped around conduits and secured in place.

MM. 338000-05 Communications: Service Stub Outs

1. All communications system work to be per Frontier requirements.
2. Communications stub out conduits to be temporarily capped/sealed to protect against foreign object intrusion. End of conduits to be marked with 2x4 Doug fir marker. Marker to be installed from the end of the conduit to three feet above finish grade. Marker to be painted orange and have the words “Com Service” written on both wide sides of the marker board.

NN. 338200-01 Internet: Joint Trench

1. All Internet system work to be per Áan Chúuphan Internet Service Provider (ACISP) requirements. Contractor will need to coordinate with the ACISP for internet component install.
2. Internet joint trench to be per scope requirements as described under electric joint trench description above.

OO. 338200-02 Internet: Junction/Pull Boxes

1. All communications system work to be per ACISP requirements.
2. junction/pull boxes to be 17”x30”x18”.

PP. 338200-03 Internet: OWTS Service

1. All communications system work to be per ACISP requirements.
2. Onsite wastewater treatment system internet service to be wireless basic broadband. Contractor to coordinate with ACISP for hardware install. Owner will pay direct to ACISP for any fees associated with establishing the service connection.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 011000